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NORBERT FARAGÓ

COMPLEX, HOUSEHOLD BASED ANALYSIS OF THE STONE TOOLS OF POLGÁR-CSŐSZHALOM

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Introduction

Papers on the Hungarian Neolithic rarely distinguished chipped stone tools systematically in a separate analysis before the last decades of the 20th century. The formative phase of archaeology, as a scientific discipline only focused on making collections, selections, and chronologies from every find and source types. The dissertation of Erzsébet Bácskay was the first of its kind, which draws a comprehensive picture of the Neolithic cultures of this territory through the evaluation of 303 tools from 35 sites. In this paper, she gathered together retouched examples from the Körös culture, Alföld LBK, Szilmeg group, Transdanubian LBK, Zselíz group, and Bükk culture.

The next synthesis was published in the 1980s, in which Małgorzata Kaczanowska investigated the Neolithic stone tool industries from the region of the Middle Danube. From this decade the different site reports became numerous also, Erzsébet Bácskay and Katalin T. Biró together published several chipped stone materials from Transdanubia, like the iconic site of Lengyel, Zengővárkony, Pécsvárad-Aranyhegy, Villánykövesd, Mórágy-Tűzköves. Besides the aforementioned monograph of Małgorzata Kaczanowska, the other fundamental work concerning the Neolithic period of the Carpathian Basin is the dissertation of Katalin T. Biró. Apart from gathering all the information about the raw material circulation during this period, she published 85 assemblages from the Middle Neolithic to the Early Copper age in more detail, with an outlook on further 330 sites, sometimes from abroad.

During the 2000's the attention of the research turned partly to the Linear Pottery Culture and its genesis, partly to the relationship of the Mesolithic and Early Neolithic population. Several site reports, monographs and conference papers came to light in connection with these topics, while studies of Late Neolithic assemblages were extremely scarce.

The Hungarian research reached a point during the last decade, where it is possible to follow finer technological differences through time, where it is possible to trace back different kind of raw materials, where natural science instruments or use-wear analyses are available, where local and regional contacts are well documented. In the meantime, there were hardly any analyses of the inner structure of a specific settlement, or there were barely any attempt to better understand the micro-scale social relationships through the chipped stone tools of this period.

Site and material

Polgár-Csőszhalom, located 3 km east of the modern town of Polgár in Northeast Hungary, has often featured in archaeological literature over the years, both in Hungary and abroad. Vere Gordon Childe referenced this place as the eponymous site of the "Polgár culture", and he placed it chronologically among many other painted ceramic styles—Jordansmühl, Lengyel, Erősd, Vinča—in the "Danubian II" phase. The long history of research at this site began in the 1950s when Ida Bognár-Kutzián opened a small trench at the top of the mound.

In 1989, a new research project was initiated with the support of the Institute of Archaeological Sciences of Eötvös Loránd University (Budapest) under the direction of Pál Raczky. The project aimed to excavate as much as possible from the tell of Polgár-Csőszhalom. The preliminary magnetometric and aerial archaeological survey revealed a roundel of five ditches with a maximum diameter of 180–190 m and a palisade system surrounding the mound, which shed new light on the intensity of the relations with the Lengyel culture.

Soon the fortuitous construction of the M3 motorway provided an opportunity to reveal that this tell was surrounded by an external settlement. From 1995 through several seasons, a 3.5 ha part of it has been systematically excavated, resulting in the discovery of 79 buildings, 123 burials, 68 wells, and more than 230 pits. Since then, more than a dozen preliminary and detailed reports have been published. The relationship between the two distinct settlement areas was investigated in more detail, on the basis of the assumption that the tell was not a simple residential mound; rather, it provided space for the ritual activities of the society. Concerning the chipped stone tools, only a few preliminary papers have discussed this site complex. Katalin T. Biró and Erzsébet Bácskay drew a

general picture about the raw material kit based on only a selected part of the collection, while Erzsébet Bácskay published two short reports about the use-wear analysis of the retouched pieces.

Including all excavation seasons and all parts of the surface assemblage, 18926 chipped artifacts were analyzed from Polgár-Csőszhalom. Among this quantity, 12276 pieces belonged to the flat settlement part, while 6650 pieces came from the tell. Both places showed the same raw material spectrum, but not in the same ratio. 95% of the provenanced artifacts came from the Tokaj Mountains at the flat settlement part, moreover, 80% percent could have been attributed either to the three main types of limnosilicites or to the obsidians. The first and second types of limnosilicite are similar to that found in the Arka-Korlát region, so it is connected to the northwestern side of the Tokaj Mountains. The third type is already known from the Hungarian literature as Mád-Mezőzombor type limnosilicite (Bácskay, Biró 2002, Fig. 11.). Apart from these main subtypes, many other limnosilicites and opalites appeared at the settlement from many different types. Some stones are most likely connected to the same Arka-Korlát region, but others are likely from Erdőbénye, Gönc-Telkibánya, or Óhuta. Another part of the assemblage also originated in the Tokaj Mountains; however, its genesis is a little bit different. Within the literature, there are two subtypes in the Tokaj Mountains: one is from the Slovakian part and the other is from the Hungarian part. The former was more frequent at Polgár-Csőszhalom. Another raw material type can be found at a similar distance from the site but in a different direction. The quartz porphyry is from the eastern side of the Bükk Mountains, namely in the region of Bükkszentlászló-Bükkszentkereszt. The significance of this raw material lies in its general archaeological context, for it is more common on Paleolithic sites than on Neolithic sites.

Also from Hungary, but at 250-300 km distance from Polgár-Csőszhalom originates the Transdanubian radiolarite. It consists of several varieties in a wide geographical range from the Bakony Mountains to the Gerecse Mountains, but all of the pieces at this settlement belong to the Szentgál subtype. The Cracow Jurassic flint is from Little Poland, at 250 km distance. The chocolate flint is very similar, and it comes from a Mesozoic bedrock also, but its original outcrops lie farther north in the Holy Cross Mountains. The Volhynian/Prut flint came from the Volhynian-Podolian Plateau, from a typical Cretaceous bedrock at a 400 km distance from the site.

The raw material spectrum of the tell looked different, namely Cracow Jurassic flint, chocolate flint, and Volhynian/Prut flint are more frequent here, constituting 16% of the lithic assemblage. Another important difference is the abundance of Mezőzombor type in this assemblage as it reached 40 percent.

Aims and methodology of the dissertation

Our project started in 2012 in a framework of complex household analysis. The first step to accomplishing such an analysis is to create a database by plotting all these finds independently of one another with their coordinates in a virtual map. This data set is arranged by archaeological sources – ceramics, stones, animal remains – forming distinct virtual layers. The second step is to reconstruct social groups on different levels with the aid of statistical and spatial analysis tools.

The chipped stone industry is very suitable for this kind of investigation, especially when a palaeoethnologic aspect is applied. The main idea behind this method is that every knapped piece can be replaced in the technological chain by reading the stigmas on it. When this mental reconstruction is connected with the locations of the respective chipped stone artifacts, much of the original toolmaking process can be visualized. Following André Leroi-Gourhan and his early research at Pincevent, the French Paleolithic research adapted this method during the 1960s, and since then it has been successfully applied beyond the borders of France also.

We have to deal with several complications to accomplish this research during the intra-site analysis of Polgár-Csőszhalom. Firstly, it was a rescue excavation in the frame of the construction of the M3 motorway, therefore the spatial information of the finds is confined directly to the spatial

information of the archaeological features. It also means that our finds were picked up and stored by stratigraphical units. Moreover, the settlement features were excavated with shovel and spade, not in a square-meter system with more precise methods, like dry/wet sieving. Unfortunately, this gives less precise results compared to those Palaeolithic examples where every piece of finds was recorded independently. In the meantime, the tell was excavated in a combined way, where both the former and later methods were applied. Concerning the site formation process, this is the most crucial part of the investigation as Michael Brian Schiffer pointed out. However, scholars of household archaeology often bypass or overleap this problem, especially in the case of large archaeological sites and assemblages.

Secondly, there was no possibility of detecting the floor level of the houses at the flat settlement, because evidence of deliberate burning, which is common on the tell, is missing here. All the finds are just indirectly connected to the houses.

Thirdly, the Polgár-Csőszhalom settlement was inhabited over a long period, for 250–300 years according to the AMS dates, so it is necessary to pay special attention to the problems of horizontal stratigraphy. Furthermore, the theoretical question of the lifespan of the houses or the pits makes this aspect of the work more problematic.

The difference between the horizontal settlement part and the tell part in itself is very important considering their supposed roles in the lifetime of the settlement. But what does this differentiation really mean? How can we imagine these processes in space and time in more detail? Does it mean that the distant raw materials were used only in a sacral context? What do the few distant pieces in the assemblage of the horizontal settlement really mean? Did some person or household express their identity or wealth with them? What if this difference is merely a result of some taphonomic effect of research strategy?

Being inspired on one side by Richard R. Wilk and William L. Rathje, the pioneers of the household archaeology, on the other side by the already published theoretical paper about the household concept of Polgár-Csőszhalom, I would like to emphasize also the need of different aspects during the approximation of these basic units. Therefore my thesis was themed around four different viewpoints: spatiality, temporality, symbology, and taphonomy. These aspects or problems have been constantly present since the start of the work, so it seemed the best to organize the thesis rather around them, and not around the two different settlement parts or the raw material-technology-typology differences.

Spatiality

When conducting an intra-site analysis it is very important to know as much as possible about the site formation processes. In the case of Polgár-Csőszhalom, all of our finds came from secondary contexts from pit infills, so the possibility to reconstruct exact site formation processes thus activity zones is very restricted. In most of the times, the archaeological structures could be dated directly with AMS, or indirectly with ceramic finds. Another concluding problem that the well known spatial analytical methods (e.g. nearest neighbor analysis) most of the times are not suitable for this research, because these are not applicable for lattice spatial processes, only for point spatial processes. Moreover, these methods are not multivariate but univariate statistical tools. The method applied here can be defined as a hybrid one, because I used correspondence analysis without including the ‘X’ and ‘Y’ coordinate into the variable set. Statistics and graphical visualization were used parallel but independently and intuitively, which means the analysis-evaluation cycle was continuous in a heuristic way. Kernel density analysis is a well known analytical tool to illustrate archaeological find distributions, but instead, Thiessen polygons were applied for this purpose because I wanted to visualize the encircling impact zone of each feature.

If we take a look at the general attributes and consider the complete settlement as a whole, the distribution looks very homogenous, no matter which raw material, technological category or type is about. It is very hard to prove the existence of activity zones which were used for only one, special purpose. According to the multiscalar investigations, the different aspects and the statistical results these zones were multipurpose during their utilization. Starting with the first step of the knapping activity, raw material nodules are not very frequent at the settlement. In general, all type of cores and debitage products appeared together, so it is not possible, to encircle zones with corticated pieces in connection with the early phases of knapping, or highlight the later knapping phases with the help of uncorticated pieces. Other byproducts, like flakes, or half products, like blades and blade fragments and finished tools, strengthen the same impression. Moreover, the different core exploitation strategies, which meant to reflect different knapping habits showed no concentrations on the settlement.

This homogeneity looks apparent only in a wider context because smaller assemblages in close vicinity look rather different. These are not statistically relevant differences also, but features do exist, in which one or another raw material, technological category or tool tends to accumulate in a moderate way. Thus the pattern looks homogenous from a distance, but having a closer look the fine divergences could have reflected spatially and/or temporally different activities, activity zones. As far as the find distribution does not let a clear classification it seems that these zones did not have a special role or function so their flexible utilization is rather probable.

Another interesting result came up when analyzing the features with larger assemblages in combined correspondence analysis. The result was complimentary when projecting onto the settlement surface, regarding that the three main types of raw materials are in inverse proportionality with each other. Conducting a similar analysis on the technological categories and retouched types resulted in a similar, not too definitive, but apparent, complex phenomenon. In other words, fine differences among the assemblages can reflect on the hand the dynamism of the different activity zones; on the other hand, they encircle large, connected territories. Between these two layers lies the middle-level of the homogenous smaller groups, which are characterized by periodic but varied activities. To sum up the different raw materials, technological categories and retouched types form a unified chipped stone assemblage on the settlement, but having a closer look makes it really clear how organic this system is.

Focusing on the tell part of the settlement, this process can be visualized more closely, however in a much less scale. The assemblages belonging to the two buildings and to the pit differed from each other greatly both quantitatively and qualitatively. Not just the distribution of the different raw materials, but the technological categories and partly the retouched types represent a diversified picture among the analyzed assemblages. Inside each of the buildings, the floor level was nearly empty, thus the scene of the everyday life barely presented any object to observe. Below this level many more finds could have been found, concluding that floor refurbishment or infilling of building trenches raised the possibility of garbage or dump infiltration. This means that tools and waste could have accumulated in and around a specific building, resulting in at the end in a homogenous distribution on a larger scale. However, thanks to the applied, more accurate technological and metrical means there are no significant differences between the above-mentioned assemblages, they represent the same tool-making tradition.

Temporality

It is very important to bear in mind different time-scales and temporalities when recording any change in the archaeological material of a specific society. This idea has been already introduced in the case of Polgár-Csőszhalom because the two settlement parts, tell and horizontal settlement showed activities in a different rhythm and cycle through time. Reconstructing the site history and chronology can aid such a multi-scalar analysis, but the work is far from done at this point. Investigating different temporalities means periodicity and the life cycle of objects and features must

take into account also. Moreover, a specific agent can transmit its effect much longer than the research could imagine. A building, a pit, a vessel or a stone tool do not exist in just a single moment, but it can define a landscape, a society, a household or a single person through decades or even longer. So time interval and periodicity of an object or a feature is as important as their mere position in the event history because chronology is only a tool to answer questions which point way beyond.

The outcome of the evaluation of the horizontal settlement is the lack of any clear trend or any change in the chipped stone assemblage on a longer term. Neither the applied raw materials nor their ratio has changed which could be interpreted as a temporal shift in any aspect. From the beginning, it seems that raw materials from the northern part of the Tokaj Mountains dominate the whole assemblage. In contrast, Mezőzombor type from the southern part of the Tokaj Mountains plays only a minor part during the full lifetime of the settlement. However, obsidian from the same origin showed a more dynamic variability. As for the distant raw materials, their ratio was homogenously low in every respective feature. The technological analysis resulted in a similar way as either in a specific raw material or between different raw materials there is no statistically significant difference among the different features. The amount of end-scrapers in the group of retouched tools is so dominant, that it makes the relationship between other types insignificant. Generally, the most important observation can be connected to two specific, neighboring features because the largest difference between the two assemblages was recorded between them. Meanwhile, these two sets of finds complemented each other and represented the complete stone tool making tradition at this settlement. In this sense, there are no long term trends, yet on the level of the everyday life small-scale differences can be detected in the short term.

The tell settlement part gave an opportunity to investigate long term, continuous processes, and in this sense a clear trend became apparent. As time passed by distant, so-called exotic raw materials got more and more frequent, moreover this observation possibly can be associated with the growing amount of orthogonal and conical cores. Among the retouched tools a clear expansion of types was observed, although it was more obvious in the third excavation trench. Considering the middle-level temporal cycles a defined, repetitive pattern was apparent among the single layers, whose ingredients were nearly identical. Analyzing the two trenches in this sense the most significant difference was revealed between them because the largest assemblages in the third trench were connected to the layers with significant fillings without any building structures, respectively the 1st, 4th, 5th, and 8th. In contrary, the repeating pattern of the fourth trench reflected the richness of the layers 3rd and 7th which was affected by house constructions. However, the largest filling layer, which was present in the two trenches showed abundancy in both cases.

Symbols, rites

Human neuroanatomical attributes contributed to the cognitive and linguistic abilities in a complex way, which was the basis for abstract thinking and self-expression, thus resulted in the birth of advanced social structures and relationships. During this process, it was necessary for the symbols to transform into physical objects, after that into events, movements and acts, in other words to became rites. In the end, these symbols and rites act interactively with the members of the society while becoming the solid ground for a common worldview or even a religion. The archaeological imprint of such a complex phenomenon, which is a process and a result at the same time, can be very fragile. However, rites can be researched from three different aspects: firstly, those rites can be analyzed, which focused on single persons or smaller groups and served during the transformation of the involved people from one social state to another. Secondly, those grand and monumental rites can be analyzed also, which served as a medium in strengthening the inner cohesion and self-definition of the whole community, and which can be named as religious, collective rites. Thirdly, those domestic rites can be taken into account also, which purpose is to provide a channel to the supernatural during everyday life. It can be hardly differentiated from the common practice, thus

being definitive at the lowest level of the social life of a community. These categories are no clean-cut, it is obvious that in a community the ancient superstitions and practices form the basis and merged with initiation, wedding and funeral ceremonies into a coherent cosmology, which acts as a cause and effect at the end.

Chipped stones are not so frequent among the funeral rite; altogether only 20 graves presented such a grave good from the 123 graves at the horizontal settlement of Polgár-Csőszhalom. In five cases it was associated with women and in two cases it was associated with children. Generally, two or three pieces occurred per grave, but this frequency is higher in male burials. The most pieces came from grave 489 (11 pcs.) and grave 406 (7 pcs.). In contrary, the women burials never contain more than two pieces, the two children had only one piece each. The number of the chipped stones is in inverse proportionality with the age of the deceased, which means males deceased younger than 40 were accompanied by more than two pieces, while women with the same age had the maximum two pieces.

Distant raw material occurred in only three cases, typically in those graves, where young males had two or three other pieces also. Sex and age showed no correspondence with any raw materials. An interesting and general attribute of the respective chipped stones is the patina, in some cases, it made the raw material definition very difficult.

Among the technological categories, the most numerous are the unretouched blades, the second ones are the retouched tools. On the contrary, almost no pieces of flakes or cores were placed in the graves. Moreover, there is no relationship between the raw material types and the technological categories in this sense.

According to the retouched pieces, the distribution of the types is not so diversified, the whole assemblage is very homogenous. One-third of the pieces belong to the trapezes, half of them are truncated blade and the rest is end-scraper. Trapezes and truncated blades were associated with men exclusively, who were deceased in the age of 30 or 40. The only three end-scrapers were distributed among two women and one single man.

Among the 19 graves of the tell, only one contained chipped stones, which was actually a cenotaph. There was no core deposited in the burials of the horizontal settlement, but this cenotaph had one, moreover, a well-elaborated end-scraper belonged to this small assemblage also. Common characteristics of the two settlement parts are the general presence of the patina on the chipped grave goods.

Continuing with other structured depositions, chipped stones in post holes are not so frequent at the horizontal settlement. The obsidian core counts as a unique find apart from its situation because there is no other core in such a size and form. This object does not reflect the mode this raw material appear at the settlement, generally, obsidian cores and debitage products are much smaller and the connecting technological know-how needed a different attitude.

Chipped stones coming from wells or well-like hollows at the lowermost part of the pits are not so frequent either. The pieces evaluated in this dissertation are rather the rule and not the exception. The well number 272 contained 11 fragments, while well number 966 contained 12 chipped stones. It seems that neither raw material, nor technological category, nor typology was important during the choice of the accessories of the deposition rite. However, apparent similarities between the two equally homogenous assemblages suggest the conscious selection.

In contrary, the tell presented many knapped pieces in structured depositions: the assemblage at the floor of house no. 9 is one of them. It consisted of 4 chipped stones, among which one was made of chocolate flint and three were made of Mezőzombor type. Technologically one hammerstone, two blade fragment, and one flake can be mentioned. There were no retouched pieces, but two polished axes from two different raw materials completed the picture.

Among the settlement features of the horizontal settlement, those examples are extremely rare where any direct burning effect can be detected. The only oven, its remains, and a clear burnt rubble layer were observed during the excavation of pit no. 705. In most aspects, the chipped material coming from this structure was similar to the ordinary settlement fillings deposited above. This stratigraphic unit, number 1625 represented only one Mezőzombor type, while limnosilicites other than the main types were relatively frequent. Raw materials from a greater distance, first of all, Cracow Jurassic flint were equally present in both upper and lower part of this structure. Another characteristic feature was the high ratio of the cores in the burned rubble, but the oven itself and a layer with ash remain beside showed only 7 pieces.

Continuing with other features with burned remains, houses destroyed by fire were present only at the tell part of the settlement, at least in 11 cases. The structure with two distinct stories from the lowest part of the mound was chosen for further analysis. The middle part of the rubble was the most abundant in chipped material, while the upper and lower parts represented equal numbers. The raw material distribution seemed very homogenous, most of the times the pieces were connected to the Mezőzombor type, while distant raw materials were completely missing, and obsidian was present only at the uppermost part. The technological categories were distributed evenly also, but the two pieces of cores came to light from the top level. Retouched pieces were made of Mezőzombor type too, interestingly apart from the end-scrapers truncated blades and retouched blades were present in a fair number.

Taphonomy

Paleoontology-archaeozoology and archaeology all reached a point in the 1960s where the site formation process appeared among the many variables in the equation of the archaeological interpretation. The main difference between the two disciplines that excavation technique as a bias of the result has been taken into account seriously in archaeozoology for decades.

The stratigraphic feature 205 gave us the possibility to compare the excavation methods of planned excavations with the methods of rescue excavations, at least partly. After being excavated by means of the latter way and archaeological finds were revealed, the whole infilling were screened and further finds were separated from it. So the main difference between the two assemblages would be connected directly with the applied excavation strategies. The results partly verified the preliminary expectations, as the overall number almost grew by twenty times as much. It is obvious also, that with finer excavating methods there is a greater chance to find smaller chipped stones. In this case, the average size of the pieces decreased with 1-1.5 centimeters. This kind of quantitative difference raises the question of what influence this result makes on the two assemblages, and on which variables will this make an effect.

Considering the raw material distribution the most significant difference is that there was not one obsidian piece before the screening, but the ratio of this raw material reached 15% in the overall assemblage. The rest of the pieces are equally made of different raw materials making their distribution well-balanced. Distant raw materials became less significant compared with the situation before the sieving, although there was some Cracow Jurassic flint in this assemblage also.

Generally, the distribution of the technical categories changed as well, the ratio of the cores decreased from the previous 15% to 3%. The number of retouched pieces decreased similarly, it changed from 20% to 10%. Among the ratio of the unretouched flakes and blades, the latter one increased more significantly, the former 25% became 40%. Considering the different raw materials and their technological categories one by one, their overall diverse character became more homogenous after the sieving. The more detailed technological attributes, like the talons and preparations of the debitage products, the knapping angles or the different core strategies neither showed any correlation with the respective raw materials. The metric analysis of the unretouched debitage products suggests a homogenized stone industry, which is apparent among the limnosilicite

variants and the distant sources also. According to the width of the blades and blade fragments, only the obsidian and type 2 limnosilicite differ from the average in a statistically significant way. The average length of the complete blades is homogenous also with the exception of the obsidian pieces, which are generally smaller. The retouched pieces coming from the sieved assemblage did not affect the general picture as the abundance of the end-scrapers is obvious in every aspect. Other types, like truncated blades, laterally retouched blades and retouched flakes are well-balanced comparing with each other, so there is no specialization according to the raw materials. Interestingly, several types, like burins, borers, trapezes became visible after the sieving, although only in minor quantity. The first two types sporadically present at the settlement, but trapezes are absolutely unique at Polgár-Csőszhalom.

Results and conclusion

According to the above-mentioned results, the following model can be raised about the knapping activity of the residents of Polgár-Csőszhalom. The majority of their raw material was originated from the Tokaj Mountains in a very homogenous form. Two consistent trends were detected in the ratio of the three main types of limnosilicites, which concludes a centralized acquisition. It could mean either two distinct routes or two distinct sources. The knapping activity or at least its waste was focused on smaller zones defined by 4-7 buildings. These zones were located at a distance of 30-50 meters from each other and they consisted of smaller and larger assemblages. The physical limits of these zones were strict, and it is plausible that they were definitive for a very long time. The different activities encircled by these house groups represented all phases of the knapping process, but the debitage products tended to be focused, while the cores were distributed more evenly around the surface. The variability of the smaller assemblages could have indicated the individual activities repeated in a shorter time frame, while the larger assemblages could have reflected the activities conducted during a decade or two and then created a homogenous pattern over large distances. These larger assemblages served as the basis for the definition of the house groups, they are uniformly similar to each other and they are far away from each other at the same time. In this sense, these zones seem to be autonomous and their self-sustainability is rather plausible. Distant raw materials, like Cracow Jurassic flint and Transdanubian radiolarite, are evenly distributed, especially when considering their low ratio, so any peculiar role beyond their economic aspect cannot be detected archaeologically. Yet, the generally homogenous habit of the different zones might have given enough freedom for the knapping activities and for the organization of everyday life. In some cases, only one large feature contained all the chipped products, in some cases it was distributed among two or three features and in some cases nearly every building had such a pit. In some house groups, the same houses stood for a long time, and in some house groups several buildings intersect each other, so they were less constant. In some house group, there are no signs of any knapping activity, and in some housegroups only the cores were abundant in contrary with others, where the products and byproducts were numerous.

As for rites and other symbolic acts, it was impossible to distinguish them from everyday activity at the household level. However, it does not mean necessarily that there was no basic level in the Late Neolithic belief system. Although it is not fortunate to handle every settlement feature as a structured deposition, having a closer look at the emerging suspicious cases interesting observations can be conducted. The obsidian core found in an otherwise ordinary posthole is a perfect example because it is not reflecting a regular practice at this settlement, it is rather the sign of an outdated, archaic rite. Among the 70 excavated building at Polgár-Csőszhalom, there is not one similar situation.

Other clues for similar acts, like the deposition in the well or the burned remains of the hearth and its infilling cannot be connected to every house groups, this kind of activity seems to be more scarce than that. In connection with the well number 272, it was raised that its large vessel set could have reflected not just one household, but several ones could have taken part in the votive action.

Anyway, the amount and nature of the chipped stones in these assemblages witnessed no consistent preferences during their choice, so seemingly similar pieces played a symbolic role during the rite and were used in an everyday context. Having a closer look at them and their exact position a strict depositional intention can be revealed as they are reflecting a virtual *chaîne opératoire*. Generally, tool-making is defined not just by natural laws as needs, but it has a strong human part also, which is culturally determined like other parts of communal life. So it is not surprising if the products of the single phases or the whole process leveling up to a higher cognition state and becoming a symbol. Maybe it is not a mere accident also that the respective collection is so insignificant considering its composition, as it is reflecting perfectly the complete knapping activity reconstructed at Polgár-Csőszhalom. Moreover, this observation is reinforced by the material of the other well excavated in feature number 966.

It is a general view that some raw materials, especially distant ones could have served as prestige objects connected to specific persons. According to the above mentioned chipped stones might have born significance through their technology, when they reflect special know-how, like the regular, straight intact blades detached by pressure technique. However, the graves of Polgár-Csőszhalom reflect something else. The chosen twenty cases did not possess any distant raw materials or their objects seemingly did not were chosen by their extraordinary implementation. But the majority of the deceased were in their middle age and they were accompanied by complete blades or blade fragments, trapezes, truncated blades. The most frequent tool at the settlement, the end-scraper was scarce in the graves and even those rare pieces were rather attributed to women. Considering the spatial position of these burials they were distributed evenly all around the excavated surface, so they can be classified according to the observed house groups. Most of the times only one-three pieces were accompanied to them, but several house groups lacked any burials with chipped stone grave goods.

One can find the pairs of these phenomena on the tell also, but with adaptation to the completely different governing principles of this location. In other words, the tell and the horizontal settlement differed from each other fundamentally, and they played a different role in the life of the community of Polgár-Csőszhalom. If the tell is considered as a monument which represents the whole settlement and gives place for actions interpreted at higher cognitive levels, then the differences experienced among the two chipped stone assemblages must be interpreted at the global level also. According to the evaluation of the raw material composition at the two localities, it means that the Mezőzombor type and the distant raw materials had a significant role at a high social and cultural level, but this did not have any impact at the level of everyday life and it did not have any effect on the lower social units or the single persons. The location, where the tell stood later had been particular even in this earliest period because the unique, two-story building had been erected exactly here. However, the chipped stone assemblage connected to this very early period was not particular in any sense. As time passed by the cyclic filling, building, destructing actions were applied as media for the materialization of a high-level belief system and it was observed in the chipped stone raw material preferences also. The onetime society gradually turned to distant raw materials, but it affected only the assemblage of the tell, while in the field of the domestic activity and in the domain of the lower levels of the belief system this association was not manifested at all.

The last remaining aspect is connected to the excavation technique because the two main settlement parts were researched in different times with totally different excavation methods. Several international Paleolithic examples show that the accurate, square-meter system is indispensable to spatially reconstruct the knapping activity. However, the evaluation presented here proved that the bias caused by the excavation method here is moderated despite the theoretical loss of 96 percent of the chipped stones. The remaining 4 percent is very demonstrative concerning the tool manufacturing method and its phases. The most sensitive topic in this sense is the question of the different raw materials because it is plausible that the obsidian could have been more frequent at the settlement while the rest of the raw materials were more balanced. However, the ratio of distant

raw materials remained still very low. Among the technological categories, those were absent, which represent the finer preparation actions or represent the smaller debitage products. While these pieces occurred after the sieving, it is rather plausible that the knapping activity took place in the vicinity of the pit. The composition of the retouched tool kit did not change significantly, and their ratio altogether remained at 10 percent. Among the different types, end-scrapers dominated, while other, rarer types, like borers, burins, trapezes became more visible.